L Number	Hits	Search Text	DB	Time stamp
1	1575	transgenic WITH chicken	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 12:39
2	200	transgenic NEAR chicken	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:36
3	54	(transgenic NEAR chicken) and interferon$5	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:20
4	13	(transgenic NEAR chicken) and interferon$5.clm.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:23
5	7	ivarie NEAR robert	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:24
6	20	Chicken WITH (interferon or erythropoietin).clm.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:25
7	36	transgenic NEAR chicken WITH egg$2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:37
8	25	(US-6333192-$ or US-6156569-$ or US-6395961-$ or US-5784992-$ or US-5897998-$ or US-4997763-$ or US-H001065-$ or US-5162215-$ or US-6515199-$ or US-6020465-$).did. or (US-20020116732-$ or US-20020108132-$ or US-20020028488-$ or US-20010039668-$ or US-20030126628-$ or US-20030126629-$ or US-20030074681-$ or US-20030140363-$ or US-20030061629-$ or US-20030172387-$ or US-20020162134-$).did. or (WO-9919472-$).did. or (WO-9747739-$ or WO-200056932-$ or EP-1264889-$).did.	USPAT; US-PGPUB; EPO; DERWENT	2003/10/27 13:41
9	0	Chicken WITH egg WITH (interferon or erythropoietin).clm.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 13:42
-	4905	800/$?.ccls.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/10/27 12:39
-	835	800/$?.ccls. and (chick$10 or bird or fowl)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:25
-	34	(800/$?.ccls. and (chick$10 or bird or fowl)) and (transgen$10 ADJ (chick$10 or bird or fowl))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:08
-	12	(US-4997763-$ or US-H001065-$ or US-5162215-$ or US-5897998-$ or US-6156569-$ or US-6333192-$ or US-6395961-$ or US-5784992-$).did. or (US-20010039668-$ or US-20020028488-$ or US-20020108132-$ or US-20020116732-$).did.	USPAT; US-PGPUB	2002/09/16 13:21
-	2	((US-4997763-$ or US-H001065-$ or US-5162215-$ or US-5897998-$ or US-6156569-$ or US-6333192-$ or US-6395961-$ or US-5784992-$).did. or (US-20010039668-$ or US-20020028488-$ or US-20020108132-$ or US-20020116732-$).did.) and (EPO or interferon$10)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:25

-	51	(800/$?.ccls. and (chick$10 or bird or fowl)) and EPO	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:27
-	1213	EPO and (chick$10 or bird or fowl)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:26
-	486	(EPO and (chick$10 or bird or fowl)) and transgenic$10	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:26
-	31	(800/$?.ccls. and (chick$10 or bird or fowl)) and Erythropoietin$5	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:34
-	110	(800/$?.ccls. and (chick$10 or bird or fowl)) and interferon$5	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:42
-	300	(800/$?.ccls. and (chick$10 or bird or fowl)) and egg$2	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:42
-	65	((800/$?.ccls. and (chick$10 or bird or fowl)) and egg$2) and (interferon or erythropoietin)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/09/16 13:43
-	1695	Transgenic WITH (chicken OR bird or fowl or turkey or hen)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:20
-	661	(Transgenic WITH (chicken OR bird or fowl or turkey or hen)) and egg	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:12
-	16	((Transgenic WITH (chicken OR bird or fowl or turkey or hen)) and egg) and (egg SAME interferon)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:13
-	7	((Transgenic WITH (chicken OR bird or fowl or turkey or hen)) and egg) and (egg SAME erythropoietin)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:13
-	21	(((Transgenic WITH (chicken OR bird or fowl or turkey or hen)) and egg) and (egg SAME interferon)) or (((Transgenic WITH (chicken OR bird or fowl or turkey or hen)) and egg) and (egg SAME erythropoietin))	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:13
-	28	Transgenic WITH (chicken OR bird or fowl or turkey or hen).clm.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:20
-	11	Chicken WITH egg WITH (interferon or erythropoietin)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/07/15 14:37

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(FILE 'HOME' ENTERED AT 14:47:56 ON 27 OCT 2003)

FILE 'MEDLINE, AGRICOLA, CANCERLIT, SCISEARCH, CAPLUS, MEDICONF' ENTERED AT 14:48:18 ON 27 OCT 2003

L1 1921 S TRANSGENIC (L) (CHICKEN OR HEN OR FOWL OR BIRD)
L2 78 S L1 AND (INTERFERON? OR ERYTHROPOIETIN? OR EPO OR IFN?)
L3 42 DUP REM L2 (36 DUPLICATES REMOVED)
L4 42 SORT L3 PY
E IVARIE ROBERT?/AU
L5 30 S E1
L6 21 S E2
E RAPP JEFFREY?/AU
L7 16 S E1
L8 51 S L5 OR L6
L9 50 DUP REM L8 (1 DUPLICATE REMOVED)
L10 9 S L9 AND CHICKEN?
L11 7 S L7 AND CHICKEN?

=> d an ti so au ab pi l10 1-4

L10 ANSWER 1 OF 9 MEDLINE on STN
AN 2002719100 MEDLINE
TI Avian transgenesis: progress towards the promise.
SO TRENDS IN BIOTECHNOLOGY, (2003 Jan) 21 (1) 14-9. Ref: 76
Journal code: 8310903. ISSN: 0167-7799.
AU **Ivarie Robert**
AB The hen has long held promise as a low cost, high-yield bioreactor for the production of human biopharmaceuticals in egg whites. A typical egg white contains 3.5-4.0 grams of protein, more than half of which comes from a single gene (ovalbumin). Harnessing the power of the gene to express a recombinant protein could yield up to a gram or more of the protein in the naturally sterile egg. Accordingly, a major effort has been underway for more than a decade to develop robust methods for modification of the **chicken** genome. This effort intensified in the mid-1990s when several avian transgenic companies entered the scene. Progress has been made in that time but much remains to be done.

L10 ANSWER 2 OF 9 MEDLINE on STN
AN 2002190519 MEDLINE
TI Expression of exogenous protein in the egg white of transgenic **chickens**.
SO NATURE BIOTECHNOLOGY, (2002 Apr) 20 (4) 396-9.
Journal code: 9604648. ISSN: 1087-0156.
AU Harvey Alex J; Speksnijder Gordon; Baugh Larry R; Morris Julie A; **Ivarie Robert**
AB Using a replication-deficient retroviral vector based on the avian leukosis virus (ALV), we inserted into the **chicken** genome a transgene encoding a secreted protein, beta-lactamase, under the control of the ubiquitous cytomegalovirus (CMV) promoter. Biologically active beta-lactamase was secreted into the serum and egg white of four generations of transgenic **chickens**. The expression levels were similar in successive generations, and expression levels in the magnum of the oviduct were constant over at least 16 months in transgenic hens, indicating that the transgene was stable and not subject to silencing. These results support the potential of the hen as a bioreactor for the production of commercially valuable, biologically active proteins in egg white.

L10 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:753748 CAPLUS
TI Biologically Active Human Interferon .alpha.-2b Produced in the Egg White of Transgenic Hens
SO Transgenic Research (2003), 12(5), 569-575
CODEN: TRSEES; ISSN: 0962-8819
AU Rapp, Jeffrey C.; Harvey, Alex J.; Speksnijder, Gordon L.; Hu, Wei; **Ivarie, Robert**
AB We have previously described the expression of a bacterial protein in the egg white of transgenic **chickens** using a replication-deficient

retroviral vector. Here we report the expression of a glycosylated human protein, interferon .alpha.-2b (hIFN), in the egg white of transgenic hens. The hIFN secreted into the egg white was biol. active as detd. by a viral inhibition assay. Purifn. and carbohydrate anal. of the hIFN expressed in egg white revealed that two of the six major glycosylated hIFN species match the naturally occurring human hIFN glycovariants. These results support the potential of the hen as a bioreactor for the prodn. of com. valuable, biol. active, and glycosylated proteins in egg white.

L10 ANSWER 4 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:931060 CAPLUS
DN 138:215789
TI Avian transgenesis: progress towards the promise
SO Trends in Biotechnology (2002), Volume Date 2003, 21(1), 14-19
CODEN: TRBIDM; ISSN: 0167-7799
AU **Ivarie, Robert**
AB A review. The hen has long held promise as a low cost, high-yield bioreactor for the prodn. of human biopharmaceuticals in egg whites. A typical egg white contains 3.5-4.0 g of protein, more than half of which comes from a single gene (ovalbumin). Harnessing the power of the gene to express a recombinant protein could yield up to a gram or more of the protein in the naturally sterile egg. Accordingly, a major effort has been underway for more than a decade to develop robust methods for modification of the **chicken** genome. This effort intensified in the mid-1990s when several avian transgenic companies entered the scene. Progress has been made in that time but much remains to be done.

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L11 ANSWER 1 OF 7 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2003:753748 CAPLUS
TI Biologically Active Human Interferon .alpha.-2b Produced in the Egg White of Transgenic Hens
SO Transgenic Research (2003), 12(5), 569-575
CODEN: TRSEES; ISSN: 0962-8819
AU **Rapp, Jeffrey C.**; Harvey, Alex J.; Speksnijder, Gordon L.; Hu, Wei; Ivarie, Robert
AB We have previously described the expression of a bacterial protein in the egg white of transgenic **chickens** using a replication-deficient retroviral vector. Here we report the expression of a glycosylated human protein, interferon .alpha.-2b (hIFN), in the egg white of transgenic hens. The hIFN secreted into the egg white was biol. active as detd. by a viral inhibition assay. Purifn. and carbohydrate anal. of the hIFN expressed in egg white revealed that two of the six major glycosylated hIFN species match the naturally occurring human hIFN glycovariants. These results support the potential of the hen as a bioreactor for the prodn. of com. valuable, biol. active, and glycosylated proteins in egg white.

L4 ANSWER 34 OF 42 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2002:778151 CAPLUS
DN 137:274098
TI Use of avian lysozyme promoter for transgenic human **interferon** .alpha.2b and monoclonal antibody synthesis in oviduct cells
SO PCT Int. Appl., 88 pp.
CODEN: PIXXD2
IN Rapp, Jeffrey C.
AB The present invention demonstrates the use of an avian lysozyme promoter in **transgenic** human **interferon** .alpha.2b (gene **IFNMAGMAX**) and monoclonal antibody synthesis in oviduct cells. The isolated nucleic acid of the present invention is useful for reducing the chromosomal positional effect of a transgene operably linked to the lysozyme gene expression control region and transfected into a recipient cell and allows expression of an operably linked heterologous nucleic acid insert in a transfected avian cells such as, for example, an oviduct cell. The isolated avian lysozyme of the present invention may be operably linked with a selected nucleic acid insert encoding a polypeptide desired to be expressed in a transfected cell. The recombinant DNA of the present invention may further comprise a polyadenylation signal sequence or a **chicken** lysozyme 3' domain.

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2002079447	A2	20021010	WO 2002-US9866	20020329
WO 2002079447	C2	20021121		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
US 2002199214	A1	20021226	US 2001-922549	20010803

L10 ANSWER 7 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
AN 2000:145005 CAPLUS
DN 132:204036
TI Direct avian oviduct transgenesis for exogenous protein expression in poultry eggs
SO PCT Int. Appl., 54 pp.
CODEN: PIXXD2
IN **Ivarie, Robert**; Harvey, Alex J.; Murphy, George F., Jr.; Rapp, Jeffrey C.
AB Methods for prepg. transgenic avians which express exogenous protein substantially only in their oviducts are disclosed. Each of the methods comprises delivering nucleic acid expression cassettes directly to the oviducts of the avians. The exogenous protein expressed by the expression cassette is secreted into the lumen of the avian oviduct and secreted into the eggs of the transgenic avians. Methods for prepg. eggs which contain exogenous protein, such as human interferon, and methods for the prodn. of proteins are also disclosed. The methods for direct oviduct transgenesis may also be used to assess the suitability of expression cassettes or exogenous proteins for expression in the avian oviduct.

L10 ANSWER 8 OF 9 CAPLUS COPYRIGHT 2003 ACS on STN
AN 1999:271485 CAPLUS
DN 130:277660
TI Vectors comprising a magnum-specific promoter for avian transgenesis
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
IN **Ivarie, Robert D.**; Harvey, Alex J.; Morris, Julie A.; Liu, Guodong
AB This invention provides vectors and methods for the stable introduction of exogenous nucleic acid sequences into the genome of a bird and for expressing said exogenous sequences to alter the phenotype of the bird or to produce desired proteins. In particular, transgenic **chickens** are produced which express exogenous sequences in their oviducts. Eggs which contain exogenous proteins are also produced. In one specific embodiment, an avian leukosis virus retroviral vector is used which comprises a modified pNLB plasmid contg. an exogenous gene that is inserted downstream of a segment of the ovalbumin promoter region. The total length of the ovalbumin promoter segment may be from about 0.88 kb to about 7.4 kb in length, and includes both the steroid-dependent regulatory element and the neg. regulatory element. An RNA copy of the modified retroviral vector, packaged into viral particles is used to infect embryonic blastoderms which develop into transgenic birds. Alternatively, helper cells which produce the retroviral transducing particles are delivered to the embryonic blastoderm.